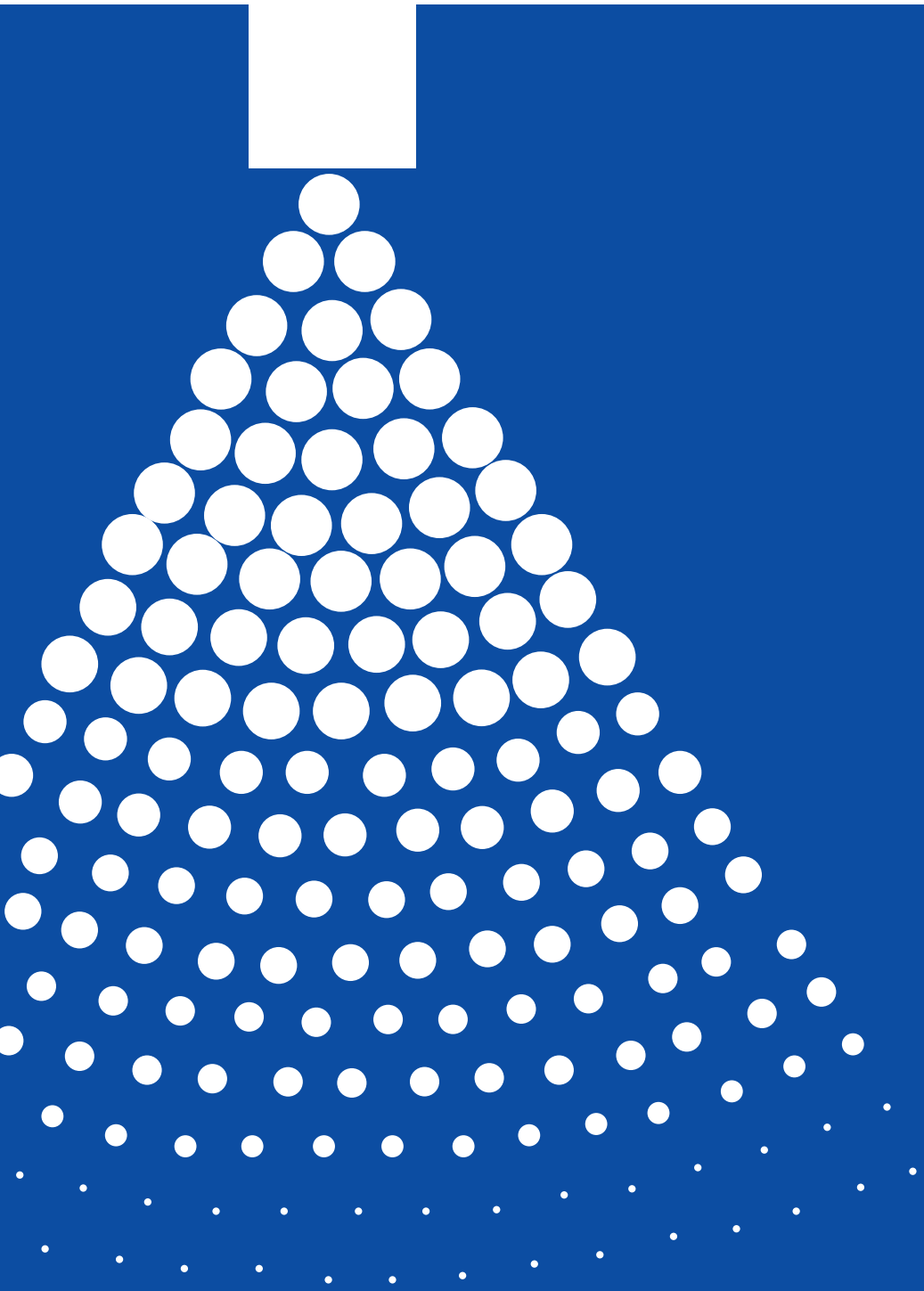
SPAD FLOW
گروه صنعتی اسپاد فلو
SPRAYING SYSTEMS AND NOZZLES

CHAPTER 1
Air-Assisted Nozzles



ENG-036-R03-03.08.20

ABOUT US

We Are Here to Help

Welcome to SPADFLOW

facing the Challenges of new industries and emerging markets.

Spray Technologies

with over Thousands of Spray Nozzle Types SPADFLOW has become Iran's leading producer.

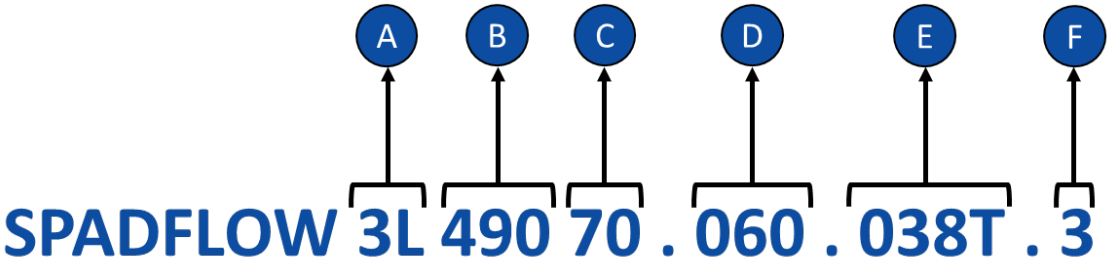
From Design to Installation

with Skilled engineers and project managers, SPADFLOW is providing consultancy and support services.

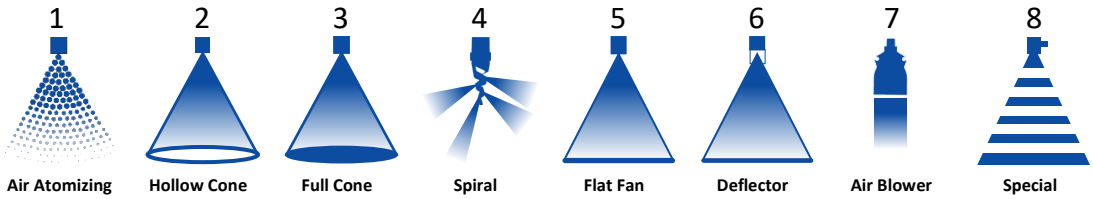
Knowledge and Experience

as an Expert on spray technology, SPADFLOW is at the forefront of production and innovation.

PRODUCT NUMBERS
Everything You Need to Know



A Nozzle Type (Spray Pattern)



B Nozzle Series

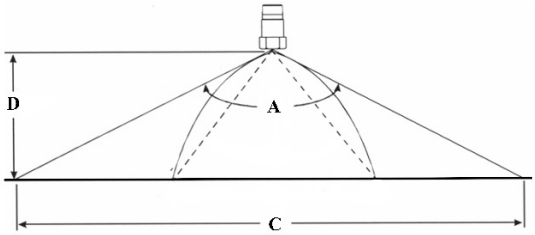
C Flow Rate Rank

The flow rate rank is relative and depends on the respective nozzle type. The exact value is mentioned in tables on the product pages.

D Spray Angle

Theoretical spray angle is mentioned in tables on the product pages. Actual spray angle depends on installation and alignment.

A = Theoretical Spray Angle
D = Spray Distance
C = theoretical Spray Coverage



SPADFLOW
گروه صنعتی اسپاد فلو
SPRAYING SYSTEMS AND NOZZLES

PRODUCT NUMBERS
Everything You Need to Know

E Connection

1/8" to 4" connections. The exact specification is mentioned in tables on the product pages.
T = BSBT Thread Type Connection
P = BSPP Thread Type Connection
N = NPT Thread Type Connection
R = Retaining Nut

F Material

Material	Code	Material	Code
Brass	1	Polyvinylchloride	PVC
AISI 304/304L Stainless Steel	2	Polypropylene	PP
AISI 316/316L Stainless Steel	3	Polyamide	PA
AISI 310 Stainless Steel	4	Polyvinylidenefluoride	PVDF
AISI 321 Stainless Steel	5	Polytetrafluorethylene	PTFE
AISI 420 Stainless Steel	6	Polyoxymethylene	POM
Tungsten Carbide	TN	Nitrile Butadiene Rubber	NBR
Phosphor Bronze	CuSn	Polylactic Acid	PLA
Copper	Cu	Acrylonitrile Butadiene Styrene	ABS
Titanium	TI	Nylon Polyamide	PA6
Aluminum	AL	Polycarbonate	PC

Ø B (Equivalent Bore Diameter)

Applies to elliptical discharge holes of flat fan nozzles. A cylindrical hole with a diameter A has the same surface area as the ellipse.

Ø E (Narrowest Free Cross Section)

Important Characteristics for determining the pre-filtration of a nozzle. Can be less than a due to several swirl ducts.

Conversion Formula: K factor $\times\sqrt{P(bar)}$ = Q (l/min)

All flow rate data in this catalogue is based on measurements with water,

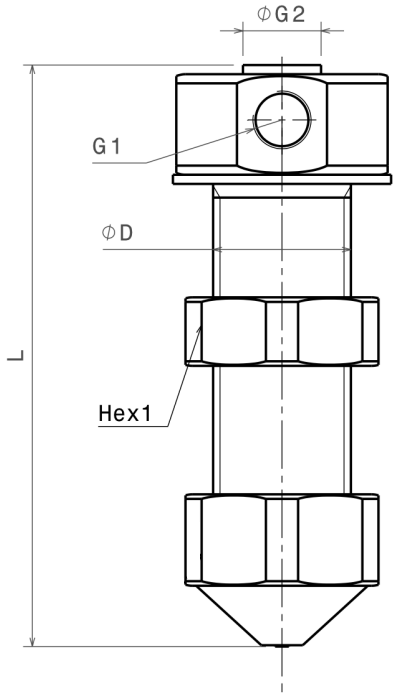
Spray angle (α)	Code	Connection Size [inch]	Ø B [mm]	Ø E [mm]	Flow rate (Q) [l/min] Pressure (P) [bar] 0.5	1.0 K factor	2.0	3.0	5.0	7.0	10.0
45°	3L 490 40 . 045	1/8"	1.25	1.25	0.57	0.76	1.00	1.18	1.44	1.65	1.90
	3L 490 60 . 045	1/4"	2.00	2.00	1.81	2.39	3.15	3.70	4.54	5.20	6.00
	3L 490 70 . 045	3/8"	2.65	2.65	3.22	4.24	5.60	6.59	8.08	9.24	10.66
	3L 490 78 . 045	1/2"	3.45	3.45	5.17	6.82	9.00	10.58	12.98	14.85	17.12
60°	3L 490 40 . 060	1/8"	1.15	1.15	0.57	0.76	1.00	1.18	1.44	1.65	1.90
	3L 490 80 . 060	3/8"	3.70	3.70	5.74	7.58	10.00	11.76	14.43	16.51	19.04
	3L 490 88 . 060	1/2"	4.65	4.65	9.19	12.13	16.00	18.82	23.08	26.41	30.46
	3L 490 96 . 060	3/4"	5.80	5.80	14.36	18.95	25.00	29.40	36.07	41.26	47.59
	3L 491 08 . 060	1"	8.15	8.15	28.72	37.89	50.00	58.80	72.14	82.53	95.18

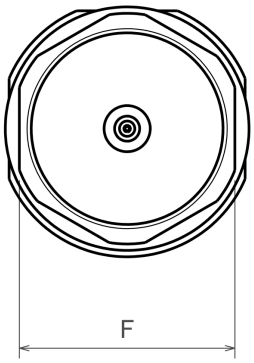
SPADFLOW spray nozzles are manufactured with the highest precision and undergo permanent quality checks. However, production-related tolerances can affect the spray angle, flow rate, droplet size and droplet distribution.

SPADFLOW گروه صنعتی اسپاد فلو SPRAYING SYSTEMS AND NOZZLES

SPADFLOW 1MA

External Mixing Spray Nozzle





Properties:

Homogeneous Spray Distribution

Very Fine Atomization at Low Liquid Pressures

External Mixing

Multiple parts

Reduced air consumption

Material*	Code
Brass	1
S.S.304	2
S.S.316	3

* Different Materials are Available Upon Request.

G1	G2	Dimensions [mm]			
		L	D	F	Hex1
1/4"	1/4"	127	M30	42	42

Nozzle Code	Flow rate		Spray Angle*
	Air = 1.5 bar Liq. = 1.5 bar	Air = 3 bar Liq. = 3 bar	
1MA . 060 . 040 . 3	0.15 l/min	0.18 l/min	40°

* Spray Angle May Vary Depending on Air and Liquid Pressures.

SPADFLOW
گروه صنعتی اسپاد فلو
SPRAYING SYSTEMS AND NOZZLES